

REMARKS

Claims 1-3 and 6-11 are in the application and are presented for consideration. By this amendment, Applicant has revised claim 1 including features from original claims 3 through 5. As these claims were indicated to be allowable, claim 1 should now be considered allowable. Claim 3 has been represented with the features of claim 1 such that this claim is now allowable. Claim 3 is indicated to be allowable if rewritten in independent form. Claims 4 and 5 have been canceled. Claim 7 has been amended to highlight the important features of the invention and clearly define over the prior art.

The Abstract of the Disclosure has been objected to because of words such as "means" and "invention". Applicant has now revised the Abstract to address these issues.

Claims 1-2 and 7-11 have been rejected as being anticipated by Stoddard et al. (U.S. 6,804,580). The rejection takes the position that each feature of claims is disclosed by Stoddard et al.

As noted above, Applicant has represented claim 1 including features of original claims 3-5. As such, claim 1 is now in allowable form.

Applicant has revised claim 7 in order to define more precisely the features of the invention. Claim 7 highlights an apparatus for synchronous control of a handling device with several means. The claim provides more precise definition of these means such that it is clear that this apparatus can act as a master for a system as well as a slave with regard to the initiating process. This is depending on whether an initiating control command is initiated or effected on the respective apparatus (see features B and C of claim 7) or whether such an

initiated or effected on another identical apparatus and from this apparatus transferred to the first apparatus as claimed in claim 7 (see particularly feature D).

Considering claim 7 as now presented, the features in combination are clearly neither taught nor suggested by Stoddard et al. Column 2, lines 38 to 53 which is cited by the Examiner and the subject matter of claim 1 of Stoddard et al. present a very different system and direct the person of ordinary skill in the art toward a different combination of features. As stated above, apparatus claim 7 presents an apparatus which can act as a master as well as a slave during the initiating process. The controls according to Stoddard et al. relate to a system wherein the controls are defined and fixed in advance (see column 2, lines 38 to 53). As such a control is either a master or a slave but cannot act in some situations as a master and in other situations as a slave. Even in the case of a change of a given robot from coordinated operation with another robot (one is master and the other is slave) to independent operation (independent wherein the entity is neither master nor slave) requires starting a new program in a sequence. As such, this entails that the control for the robot has to be restarted. Accordingly, in Stoddard et al. it is not possible to have a robot change from slave to independent operation and back to slave again while the master remains in effect/motion. According to the invention, as claimed in claim 7, before initiation of an initiating control the situation depends on the fact as to which apparatus receives via input means and initiating control command and whether such an apparatus initiates the other apparatus or (if another apparatus receives and transfers an initiating control command) receives such control command for the other apparatus (which apparatus is initiated by its input means). This presents a very different arrangement as

compared to the prior art.

The invention as claimed requires the means for initiating a control command as well as transmitting the initiating control command and considers also receiving an initiating control command transmitted by another participating control device. This combination of features is not suggested by Stoddard et al.

Accordingly, Applicant respectfully requests that the Examiner reconsider the rejection of claim 7 in view of the clarified subject matter. Favorable consideration on the merits is requested.

Respectfully submitted
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ABSTRACT OF THE DISCLOSURE

A method for the synchronous control of a plurality of handling devices, such as industrial robots, is characterized in that a control command to be implemented by controls of the handling devices participating in a synchronization is initiated on a random control and is subsequently further processed therein as a function of the nature of the command. An apparatus suitable for performing the method ~~according to the invention~~ has a storage means for storing a control program for the particular handling device, an input means for initiating a control command to be distributed for synchronization purposes, a transmitting means device for transmitting an initiated command to other controls participating in a synchronization, a receiving means device for receiving a command transmitted by another participating control, a processing means device for processing the control program in accordance with the control command and optionally for checking the initiated or received command and a decision means device for blocking or unblocking the transmission and/or for ordering a solely local implementation of an initiated control command.